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FS-8705-58 - Precise Time and Frequency - PTF 3207A Series Telnet Serial Driver

DATASHEET – Rev 0.a

DESCRIPTION

This Driver has been specially developed to process the 'PTF 3207A' Series Time and Frequency Instrument protocol over Telnet.

It provides services for monitoring and setting instrument data including monitoring of faults.

The Telnet protocol provides a transport layer for end-to-end communication. The protocol does not define application layer usage. Thus this driver cannot be used for telnet applications other than for PTF 3207A series instrument.

PTF 3207A Time and Frequency System Description and Features

The ptf 3207A provides high-precision time and frequency signals. Its modular design allows factory customization for a wide range of applications. In its standard configuration, the ptf 3207A functions as a stand-alone unit which can receive an IRIG time code input, 10MHz input, or 1PPS input, synchronizes its internal oscillator to that input, and produces time code and frequency outputs.

When paired with its internal timing-optimized GNS receiver, the ptf 3207A provides 1x10-12 frequency output accuracy, and better than 30 nS RMS accuracy to UTC (USNO). The ptf 3207A is available in a 19-inch 1U or 2U chassis with rack mount ears for installation.

This new range of Time and Frequency Instruments incorporates a flexible architecture to meet the most demanding instrument synchronization requirements. The ptf 3207A incorporates a dual redundant reference source design that enables high-availability of the instrument source. To achieve high-availability, the user configures the ptf 3207A with dual independent GPS receivers and antennas, or with one GPS antenna/receiver and one time code or 1PPS reference. In addition, the 1U chassis, when configured with two modules, provides dual redundancy and distribution in a single 1U unit

A link to the online manual could be inserted here

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Driver Description

The client side of the driver sends messages to read and set data in the instruments. Only a client version of this driver has been developed. The server side of the protocol has not been developed. The driver therefore cannot be used to simulate a 3207A series instrument. The client was tested against an operational unit. This driver is not capable of processing unsolicited messages from the instrument.

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The driver can be linked with other FieldServer drivers to form regular FieldServer firmware that can be installed on FieldServer gateways including legacy QuiskServers. Other drivers can access the instrument data and serve this data using other protocols such as BACnet and Modbus It also allows these other protocols to send data to the instruments.

This Driver is a serial driver supporting RS232 and RS485. It is a peer to peer driver so if RS485 were to be used only one instrument can be connected.

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CONNECTION FACTS

FIELDSERVER MODE	NODES	COMMENTS
Client	Many	Driver can be configured to poll for data from multiple 3207A instruments provided each as a unique IP address.
Server		Not Available. If you need this feature call our sales department.

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FORMAL DRIVER TYPE

Ethernet TCP/IP
Active Client

COMPATIBILITY

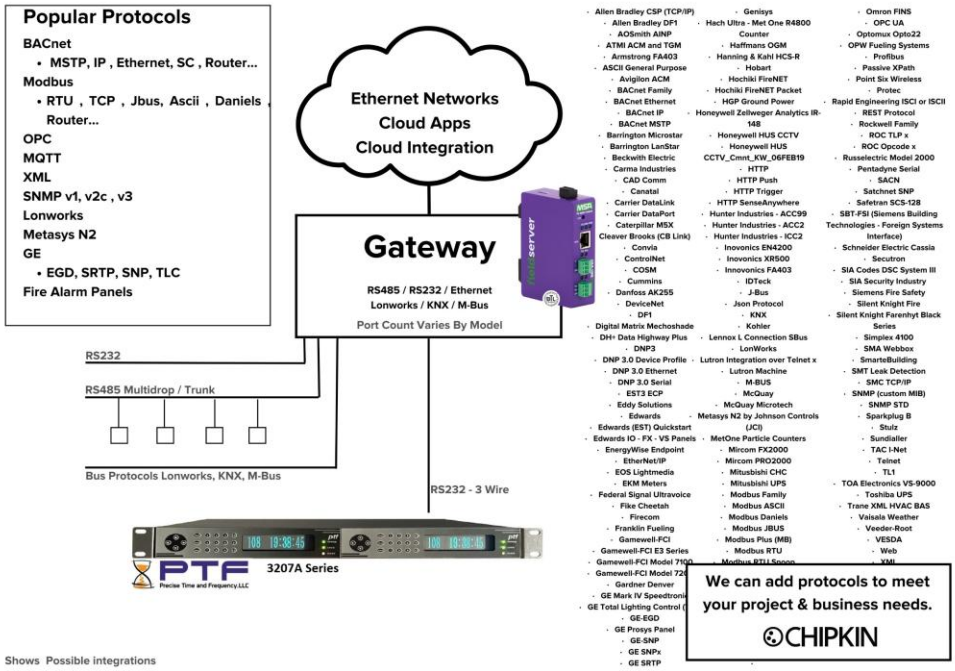
FIELDSERVER MODEL	COMPATIBLE
FS 2010/2011/3010 - F Series	Yes
FS-QS Series	Yes
FS-35 Series	No
Pre 2018 Original Series	No

DEVICES TESTED

DEVICE	TESTED (FACTORY, SITE)
3207A	2024 Chipkin Lab 2024 At PTF

CONNECTION CONFIGURATIONS

Multiple upstream protocols and connection supported. See list of FieldServer Drivers.



Shows Possible integrations

PROTOCOL SERVICES SUPPORTED/NOT SUPPORTED

PROTOCOL SERVICE		SUPPORTED
A15 - TIME-MODE		Yes
A16 - T-OFFSET		Yes
A21 - 1PPS-SRCE		Yes
A36 - STATUS		Yes
A23 - CNST-SEL		Yes
A41 - RF-GAIN		Yes
A77 - PRINTMON		Yes
A Servo		Yes
All other Services		No

Information to be provided in the driver manual

The manual will include the following

- General information on configuration and operation of the FieldServer Protocol Gateway
- Specific information on configuration and operation of the PTF 3207A Series Driver
- Connection information
- Information on how the data is stored in the FieldServer Data Arrays. This information is used to map the data onto the 1 or more other protocols required for a customer site.
- Driver error message and where applicable it will provide information on how to correct the error.
- The driver will provide a log of messages that will show the flow of data. This is useful for setup and testing.

Note: The driver does not store text data as text. Almost all other protocols do not support text. Rather the driver stores and uses enumerated numeric data. The manual and std configuration file will contain a list of these enumerations.

Default FieldServer configuration & Mib File

A default configuration file will be provided and made available on the Chipkin.com website.
It will be loaded onto FieldServer gateways that are shipped to you
It will contain a configuration for a single instrument mapped onto SNMPv2c using the MSA FieldServer FS-‘8704-26 - SNMP_STD’ Driver and ‘8704-06 BACnet driver. An appropriate MIB file will be provided.

REVISION HISTORY

DATE	RESP.	DRIVER VERSION	DOCUMENT REVISION	COMMENTS
2024 May	PMC	1	0	Draft for review
2024 May 16	PMC	1	0.a	Updated Draft. Changes of signifcane are marked as review comments.
2024 May 21	PMC	1	0.b	Updated Draft. Changes of signifcane are marked as review comments.
2024 Jul 09	PMC	1	1.0	Released